

## WHAT IS CLAIMED IS:

1. A method of keyframing an object, comprising:
  - identifying at least one property and a time for the object;
  - creating a first compound key frame at the time;
  - receiving a second time for the object; and
  - creating a second compound key frame at the second time.
2. The method of claim 1, further comprising receiving additional times for the object and creating associated compound key frames at each of the additional times.
3. The method of claim 1, wherein receiving the second time for the object comprises moving a playhead to a position on a timeline in a user interface, the position corresponding to the second time.
4. The method of claim 1, further comprising entering an animate mode prior to creating the first compound key frame.
5. The method of claim 1, wherein each of the first and second compound key frames represents the state of the at least one property on the object at the associated time.
6. The method of claim 1, further comprising receiving a change to the at least one property prior to creating the second compound key frame, the second compound key frame incorporating the change to the at least one property.
7. The method of claim 6, further comprising creating an attribute key frame responsive to the received change to the at least one property if no attribute key frame exists for the at least one property at the time the received change is received, and changing an existing attribute key frame responsive to the received change to the at least one property if the existing attribute key frame exists at the time the received change is received.

8. A method of keyframing an object, comprising:

- receiving a value for an attribute for the object at a first time;
- if an attribute key frame corresponding to the attribute exists at the first time, then amending the attribute key frame responsive to the received value for the attribute;
- otherwise, populating a neighboring object key frame with an attribute key frame if an object key frame exists.

9. The method of claim 8, further comprising creating an attribute key frame at the first time if neither an attribute key frame nor an object key frame exists at the first time.

10. The method of claim 8, wherein populating the neighboring object key frame comprises:

- if the neighboring object key frame exists later in time than the first time, and an attribute key frame exists later in time than the first time, then setting a first value to the value of the attribute key frame that exists later in time than the first time;
- if the neighboring object key frame that exists later in time than the first time, and an attribute key frame does not exist later in time than the first time, then setting the first value to the value of the last attribute key frame recorded or a base value if none exists;
- and
- creating a new attribute key frame at the neighboring object key frame using the first value.

11. The method of claim 10, further comprising:

- if the object key that exists is earlier in time than the first time, and an attribute key frame exists earlier in time than the first time, then setting a second value to the value of the attribute key frame that exists earlier in time than the first time;
- if the object key that exists is earlier in time than the first time, and an attribute key frame does not exist earlier in time than the first time, then setting the second value to the value of the originally received value for the attribute; and
- creating a new attribute key frame at the neighboring object key frame using the second value.

12. The method of claim 8, wherein populating the neighboring object key frame comprises:

- if the object key that exists is earlier in time than the first time, and an attribute key frame exists earlier in time than the first time, then setting a first value to the value of the attribute key frame that exists earlier in time than the first time;

- if the object key that exists is earlier in time than the first time, and an attribute key frame does not exist earlier in time than the first time, then setting the first value to the value of the originally received value for the attribute; and

- creating a new attribute key frame at the neighboring object key frame using the first value.

13. In a computer system having a graphical user interface including a display and a user interface selection device, a method of keyframing an object via a timeline element on the display, comprising:

- receiving a selection signal indicative of the user interface selection device selecting at least one property and a time for the object;

- displaying a first compound key frame at the time on the timeline element;

- receiving a selection signal indicative of the user interface selection device selecting a second time for the object; and

- displaying a second compound key frame at the second time on the timeline element.

14. The method of claim 13, further comprising receiving additional selection signals indicative of the user interface selection device selecting additional times for the object, and displaying associated compound key frames at each of the additional times on the timeline element.

15. The method of claim 13, wherein receiving the selection signal indicative of the user interface selection device selecting a second time for the object comprises receiving an

execution signal indicative of a user moving a playhead to a position on a timeline in the timeline element, the position corresponding to the second time.

16. The method of claim 13, further comprising receiving an execution signal indicative of a user selecting an animate mode prior to displaying the first compound key frame.

17. The method of claim 13, further comprising receiving a selection signal indicative of the user interface selection device selecting a change to the at least one property prior to displaying the second compound key frame, the second compound key frame incorporating the change to the at least one property.

18. The method of claim 17, further comprising displaying an attribute key frame responsive to the received change to the at least one property on the timeline element if no attribute key frame exists for the at least one property at the time the received change is received, and changing an existing displayed attribute key frame responsive to the received change to the at least one property if the existing displayed attribute key frame exists at the time the received change is received.

19. A display device having rendered thereon a timeline element for keyframing an object by receiving a selection signal indicative of a selection of at least one property and a time for the object; displaying a first compound key frame at the time on the timeline element; receiving a selection signal indicative a selection of a second time for the object; and displaying a second compound key frame at the second time on the timeline element.

20. The display device of claim 19, wherein the timeline element is adapted to receive additional selection signals indicative of a selection of additional times for the object, and display associated compound key frames at each of the additional times on the timeline element.

21. The display device of claim 19, wherein the timeline element comprises a movable playhead.

22. The display device of claim 19, wherein the timeline element is adapted to receive an execution signal indicative of a user selecting an animate mode.

23. The display device of claim 19, wherein the timeline element is adapted to receive a selection signal indicative of a selection of a change to the at least one property prior to displaying the second compound key frame, the second compound key frame incorporating the change to the at least one property.

24. The display device of claim 23, wherein the timeline element is further adapted to display an attribute key frame responsive to the received change to the at least one property on the timeline element if no attribute key frame exists for the at least one property at the time the received change is received, and to change an existing displayed attribute key frame responsive to the received change to the at least one property if the existing displayed attribute key frame exists at the time the received change is received.

25. A method in a computer system for displaying on a display device a keyframing of an object, the method comprising:

- receiving an indication from a user of a value for an attribute for the object at a first time;

- if an attribute key frame corresponding to the attribute, in accordance with the received user indication, exists at the first time, then displaying on the display device the attribute key frame responsive to the received value for the attribute;

- otherwise, displaying on the display device a neighboring object key frame with an attribute key frame if an object key frame exists.

26. The method of claim 25, further comprising displaying an attribute key frame at the first time if neither an attribute key frame nor an object key frame exists at the first time.

27. The method of claim 25, wherein displaying on the display device the neighboring object key frame comprises:

if the neighboring object key frame exists later in time than the first time, and an attribute key frame exists later in time than the first time, then setting a first value to the value of the attribute key frame that exists later in time than the first time;

if the neighboring object key frame that exists later in time than the first time, and an attribute key frame does not exist later in time than the first time, then setting the first value to the value of the last attribute key frame recorded or a base value if none exists; and

displaying a new attribute key frame at the neighboring object key frame using the first value.

28. The method of claim 27, further comprising:

if the object key that exists is earlier in time than the first time, and an attribute key frame exists earlier in time than the first time, then setting a second value to the value of the attribute key frame that exists earlier in time than the first time;

if the object key that exists is earlier in time than the first time, and an attribute key frame does not exist earlier in time than the first time, then setting the second value to the value of the originally received value for the attribute; and

displaying a new attribute key frame at the neighboring object key frame using the second value.

29. The method of claim 25, wherein displaying on the display device the neighboring object key frame comprises:

if the object key that exists is earlier in time than the first time, and an attribute key frame exists earlier in time than the first time, then setting a first value to the value of the attribute key frame that exists earlier in time than the first time;

if the object key that exists is earlier in time than the first time, and an attribute key frame does not exist earlier in time than the first time, then setting the first value to the value of the originally received value for the attribute; and

displaying a new attribute key frame at the neighboring object key frame using the first value.

30. In a computer system having a graphical user interface including a display and a user interface selection device, a method of providing an on-object user interface on the display, comprising:

- receiving a selection signal indicative of the user interface selection device selecting an object;

- receiving a selection signal indicative of the user interface selection device selecting a property of the object to change;

- displaying a user interface in proximity to the object.

31. The method of claim 30, wherein the displayed user interface indicates when changes done in an authoring tool user interface are being recorded by an animation system.